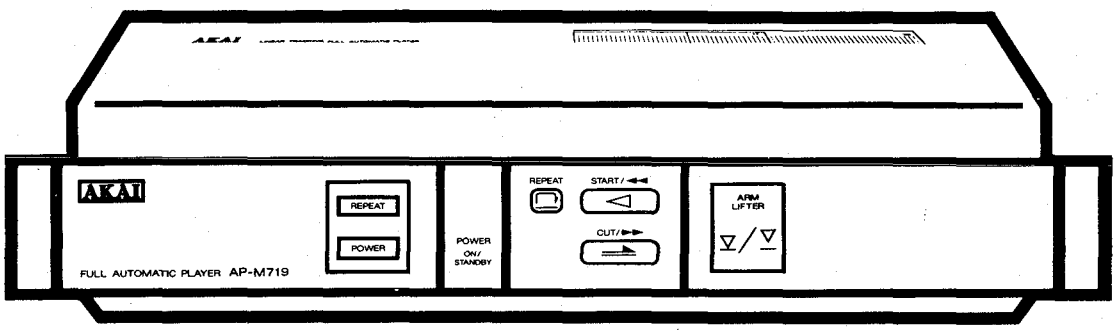
AKAI SERVICE MANUAL



FULL AUTOMATIC PLAYER

MODEL AP-M719

SPECIFICATIONS

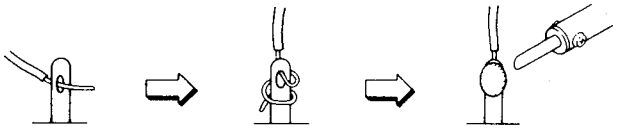
Motors	EG servo DC motor
Platter	300mm aluminum diecast
Speed	33-1/3, 45rpm
Wow & flutter	0.05% (WRMS)
Rumble	38dB (33-1/3rpm)
	35dB (45rpm)
Tone arm	Static blanced liner tracking type
Effective arm length	90mm
Cartridge	VM TYPE plug-in type
weight	5.9g
output voltage	2.5mV
optimal stylus pressure	1.5g (Fixed)
channel blance	2dB
channel separation	20dB (1kHz)
Dynamic complance	8×10^{-6} cm/dyn
Power requirement	AC220V, 50Hz for Europe except UK
	AC240V, 50Hz for UK
Dimensions	385 (W) × 95 (H) × 330 (D) mm
Weight	3.85kg

* For improvement purposes, specifications and design are subject to change without notice.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locatoins.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 M ohms. but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be headphone jacks line-in-out jacks etc. more than 2.2 M ohms (ground terminals, microphone jacks).

★INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

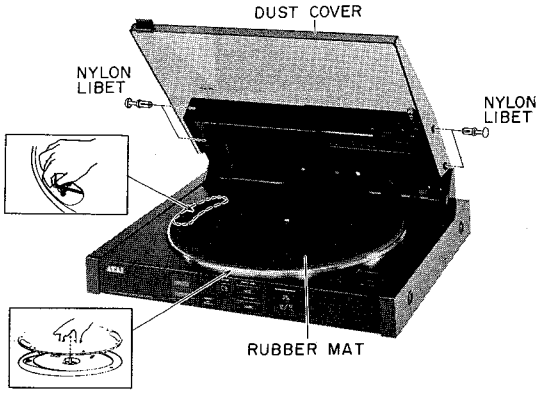
Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
[A]	USA
[B]	UK
[C]	Canada
[E]	Europe (except UK)
[J]	Japan
[S]	Australia
[V]	W. Germany only
[U]	Universal Area
[Y*]	Custom version

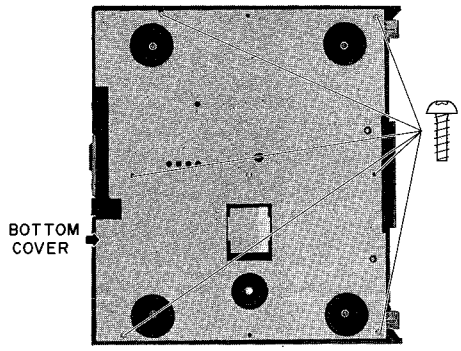
I. DISASSEMBLY

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

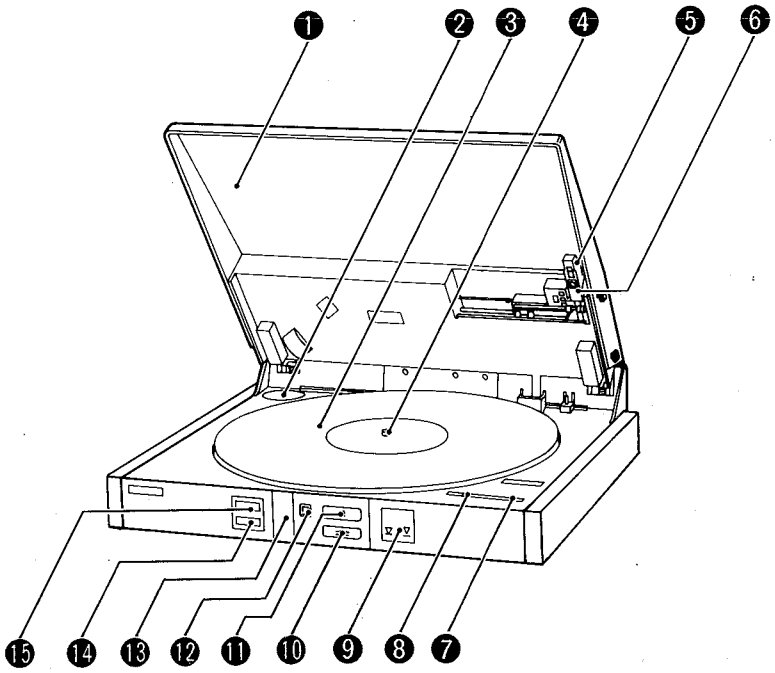
1 REMOVAL OF PLATTER AND DUST COVER



2 REMOVAL OF BOTTOM COVER



II. CONTROLS



1. **Dust Cover**
2. **45 rpm adaptor holder**
   For use with the 45 rpm adaptor.
3. **Platter and rubber mat**
4. **Spindle**
5. **Cartridge**
6. **Linear tracking tone arm**
   Holds the cartridge at the correct position.
7. **SPEED 45/33 selector**
   To set the record playback speed.
8. **SIZE 17/30 selector**
   To set the record size.
9. **ARM LIFTER (▽/▽) button**
   Manually raises and lowers the tone arm.
10. **CUT/▶▶ (⏏) Arm Backward button**
    Stops playback and moves the tone arm manually backward.
11. **START/◀◀ (◁) Arm Forward button**
    Starts auto play and moves the tone arm manually forward.
12. **REPEAT (⟲) button**
    Repeatedly plays the entire record 15 times.
13. **POWER ON/STANDBY switch**
    To turn on and off the power.
    * This switch does not completely switch off the power. If you want to completely turn off the Akai turntable, disconnect the power cord from the timer or the household AC outlet.
14. **POWER indicator**
    Indicates that the POWER ON/STANDBY switch is turned ON. The POWER indicator flashes when the tonearm is moving, during Manual Playback.
15. **REPEAT indicator**
    Indicates the repeat playback is engaged.

III. PRINCIPAL PARTS LOCATION

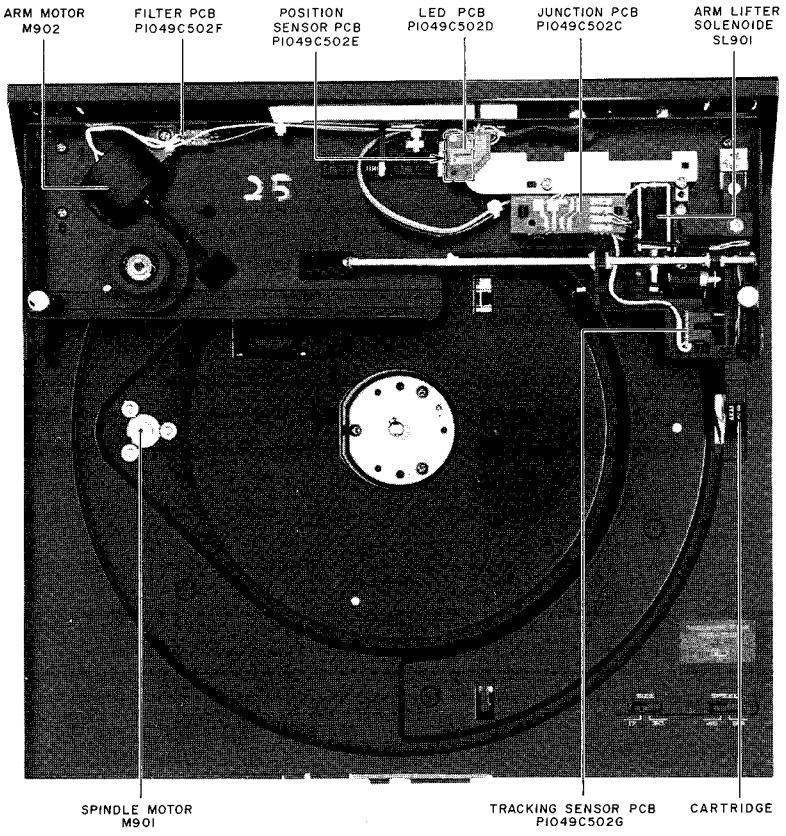


Fig. 3-1 Upper View

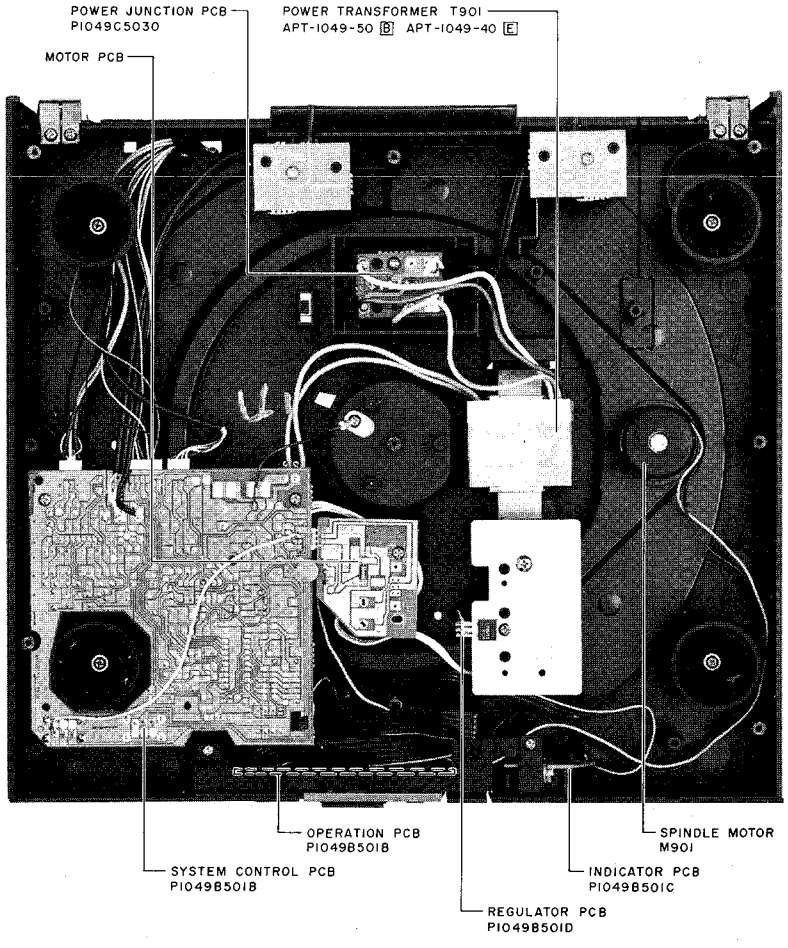


Fig. 3-2 Bottom View

IV. ADJUSTMENT

4-1. ORDINARY MECHANICAL ADJUSTMENT

1) Ordinary Mechanical Adjustment such as Stylus Pressure, Overhang and Tonearm Height Adjustment are not necessary since this model is equipped with a Static-Balance Linear Tracking Tonearm.
2) Stylus Pressure is pre-adjusted to 1.5 grams at the factory, and re-adjustment is not necessary in normal conditions.

4-2. ELEVATION AND POSITION ADJUSTMENT

1) This adjustment is not necessary unless the Elevation or Elevation prop is replaced or miss-adjusted.
2) Hold the Tone arm with the Moving Base Block and separate the Elevation Prop from the Tonearm.
   Then, bring the Elevation prop close to the Tonearm, and adjust the Elevation prop close to the Tonearm, and adjust the Elevation Prop with a flat type screwdriver to the place where the position of the notch Ⓐ on the Elevation Prop coincides with the projection part Ⓑ on the Tonearm as shown Fig. 4-1.

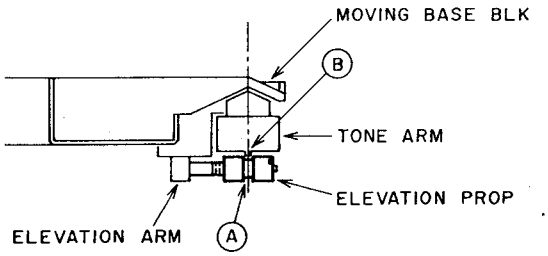


Fig. 4-1

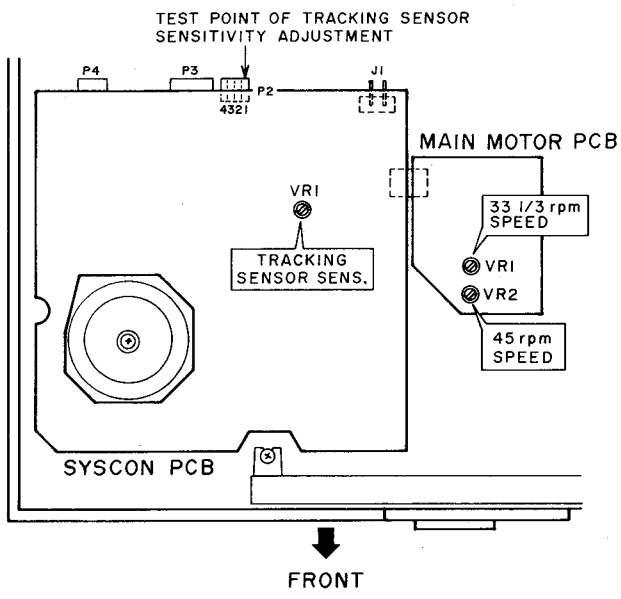


Fig. 4-2 Bottom View

4-3. TRACKING SENSOR SENSITIVITY ADJUSTMENT (Refer to Fig. 4-2)

1) Place a 30 cm record on the platter and put the power "ON".
2) Connect a digital voltmeter to Pin 1 of the Connector (P2) on the SYSTEM CONTROL PC BOARD.
3) Press the "START/ ◄◄ ", shift the Tonearm and bring the Tonearm down by pressing the "ARM LIFTER ▼ / ▼ " key.
   At this stage, fix the Tonearm with a cello-phanetape to avoid setting down to its rest position.
4) Adjust VR1 so that the DC voltage is 3.6V ± 0.2V.

4-4. SPEED ADJUSTMENT (Refer to Fig. 4-2)

1) Set the test record (33-1/3 rpm at 1000 Hz) on the platter.
2) Turn "ON" the power and set the speed selector to 33-1/3 rpm.
3) Play back the test record (33-1/3 rpm 1000 Hz). The playback output frequency is adjusted to 995 Hz ± 5 Hz on the VR1 on the MAIN MOTOR PC BOARD.
4) Set the speed selector to 45 rpm. The playback output frequency is adjusted to 1343 Hz ± 5 Hz by VR2.

4-5 LEAD IN POSITION ADJUSTMENT (Refer to Fig. 4-3)

1) Set the 30 cm record on the platter.
2) Auto play the record and confirm where the tonearm descends.
3) Turn the Lead-in adjustment screw with a flat type screwdriver.

* Turn the screwdriver slowly for accuracy.

Ⓐ Turn clockwise: to set towards the Arm Rest Direction.

Ⓑ Turn counterclockwise: to set towards the Spindle Direction.

Confirm the position after each adjustment.

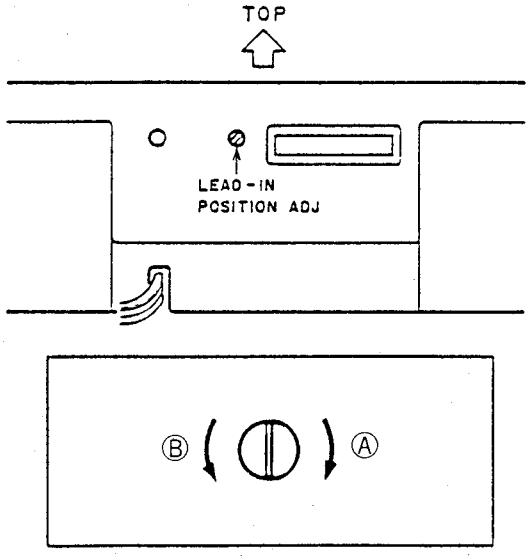


Fig. 4-3

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

- SP (Service Parts) Classification
- A small "x" indicates that this part is not shown in the Photo or Illustration.
- This number corresponds with the individual parts index number in that figure.
- This number corresponds with the Figure Number.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-X1	EI-318384	OSC X'TAL NC-18C

- Symbols for primary destination
  - [A]: AAL(U.S.A.) [S]: SAA(Australia)
  - [B]: BEAB(England) [U]: U/T(Universal Area)
  - [C]: CSA(Canada) [V]: VDE(W. Germany)
  - [E]: CEE(Europe) [Y]: Custom Version
  - [J]: JPN(Japan)
- SP (Service Parts) Classification
- These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	BM-P1049A060A	MOTOR ARM BLK AP-M313-C
2	BM-P1041A030A	MOTOR MAIN BLK AP-M50-C(U)
3	*BT-361005	TRANS POWER APT-1049-10 (J) [J]
4	*BT-361004	TRANS POWER APT-1049-70 (U) [U]
5	*BT-361006	TRANS POWER APT-1049-30(C,A) [C,A]
6	*BT-361007	TRANS POWER APT-1049-40 (E) [E]
7	*BT-361008	TRANS POWER APT-1049-50 (B,S) [B,S]
8	*ED-322238	D SILICON 1B4B41 100/1.0A
9	ED-366621	D LED SLH-56MC3 GREEN
10	ED-366620	D LED SLH-56VC3 RED
11	ED-359745	D LED TLN113 INFRARED
12	ED-344280	D SILICON H GMA-01-FY2 F05
13	ED-361267	D ZENER H 05AZ5.1 X
14	ED-361269	D ZENER H 05AZ6.8 X
15	ED-362910	D ZENER H 05AZ5.6 X
16	*EF-593706	FUSE SEMKO T 250V 500MA [E,S]
17	*EF-355374	FUSE BET T 250V 500MA [B]
18	*EI-359734	IC TA78M12P
19	EI-357879	IC LA5512
20	EI-359733	IC M54547P
21	EI-359735	IC P1049A-1842
22	EP-359740	SOLENOID P1049
23	ES-359736	SW SLIDE P1049 1-01-02S
24	*ES-337898	SW SLIDE 00120163 01-2 [U]
25	ES-349367	SW TACT SKHHAK003A
26	ET-359746	TR PHOTO TPS-613
27	ET-330225	TR 2SC1815 BL
28	ET-306719	TR 2SC2236 O,Y
29	ET-365456	TR 2SD1468S Q,R,S
30	MB-355119	BELT EP
31	MZ-360159	GEAR TRACKING
32	TP-359742	TONE ARM ARM-M313

2. P.C BOARD BLOCK

Ref. No.	Part No.	Description
2-1	BA-P1049A020C	PC#SYSCON BLK AP-M719(U,J,C,A) [U,J,C,A]
2-1A	BA-P1049A020D	PC# SYSCON BLK AP-M719(E,B,S) [E,B,S]

NOTE: PC SYSCON BLK consists of following PC BOARDS.

- SYSTEM CONTROL PC BOARD
- OPERATION PC BOARD
- INDICATOR PC BOARD
- REGULATOR PC BOARD

3. SYSTEM CONTROL P.C BOARD

Ref. No.	Part No.	Description
3-D1	ED-344280	D SILICON H GMA-01-FY2 F05
3-D3	ED-344280	D SILICON H GMA-01-FY2 F05
3-D5	ED-361269	D ZENER H 05AZ6.8 X
3-D6	ED-361267	D ZENER H 05AZ5.1 X
3-D7	ED-362910	D ZENER H 05AZ5.6 X
3-D8	*ED-322238	D SILICON 1B4B41 100/1.0A
3-IB1	EH-349274	COMP R EXB-P86223K
3-IC1	EI-359733	IC M54547P
3-IC2	EI-359735	IC P1049A-1842
3-L1	EO-345922	COIL FIX 1 LAL03KH 470K
3-R7	ER-359738	R OMF H S15 FS 1W 151J
3-R55	ER-333065	R OMF H S20 FS 2W 220J
3-R56	ER-359739	R OMF H S15 FS 1W 121J
3-SW1	ES-359736	SW SLIDE P1049 1-01-02S
3-SW2	ES-359736	SW SLIDE P1049 1-01-02S
3-TR1	ET-365456	TR 2SD1468S Q,R,S
3-TR2	ET-365456	TR 2SD1468S Q,R,S
3-TR4	ET-306719	TR 2SC2236 O,Y
3-TR5	*ET-306719	TR 2SC2236 O,Y
3-TR10	ET-330225	TR 2SC1815 BL
3-TR11	ET-330225	TR 2SC1815 BL
3-VR1	EV-362299	R S-FIX H V8EK-PV 3P 203

4. OPERATION P.C BOARD

Ref. No.	Part No.	Description
4-TS1	ES-349367	SW TACT SKHHAK003A
4-TS2	ES-349367	SW TACT SKHHAK003A
4-TS3	ES-349367	SW TACT SKHHAK003A
4-TS4	ES-349367	SW TACT SKHHAK003A
4-TS5	ES-349367	SW TACT SKHHAK003A
4-F1A	*EF-593706	FUSE SEMKO T 250V 500MA [E,S]
4-F1B	*EF-355374	FUSE BET T 250V 500MA [B]

5. INDCATER P.C BOARD

Ref. No.	Part No.	Description
5-D101	ED-366620	D LED SLH-56VC3 RED
5-D102	ED-366620	D LED SLH-56VC3 RED
5-D103	ED-366621	D LED SLH-56MC3 GREEN
5-D104	ED-366621	D LED SLH-56MC3 GREEN

6. REGULATOR P.C BOARD

Ref. No.	Part No.	Description
6-IC101	*EI-359734	IC TA78M12P

7. POSITION SENSOR P.C BOARD

Ref. No.	Part No.	Description
7-PH1	ET-359746	TR PHOTO TPS-613
7-PH2	ET-359746	TR PHOTO TPS-613

8. LED P.C BOARD

Ref. No.	Part No.	Description
8-D201	ED-359745	D LED TLN113 INFRARED

9. FILTER P.C BOARD

Ref. No.	Part No.	Description
9-C101	EC-348696	C EC V NP BP 100M 16.0DC

10. TRACKING SENSOR P.C BOARD

Ref. No.	Part No.	Description
10-PH101	ET-344472	DETECTOR ON1128AK

11. POWER JUNCTION P.C BOARD

Ref. No.	Part No.	Description
11-SW301	*ES-337898	SW SLIDE 00120163 01-2 [U]

12. MOTOR P.C BOARD

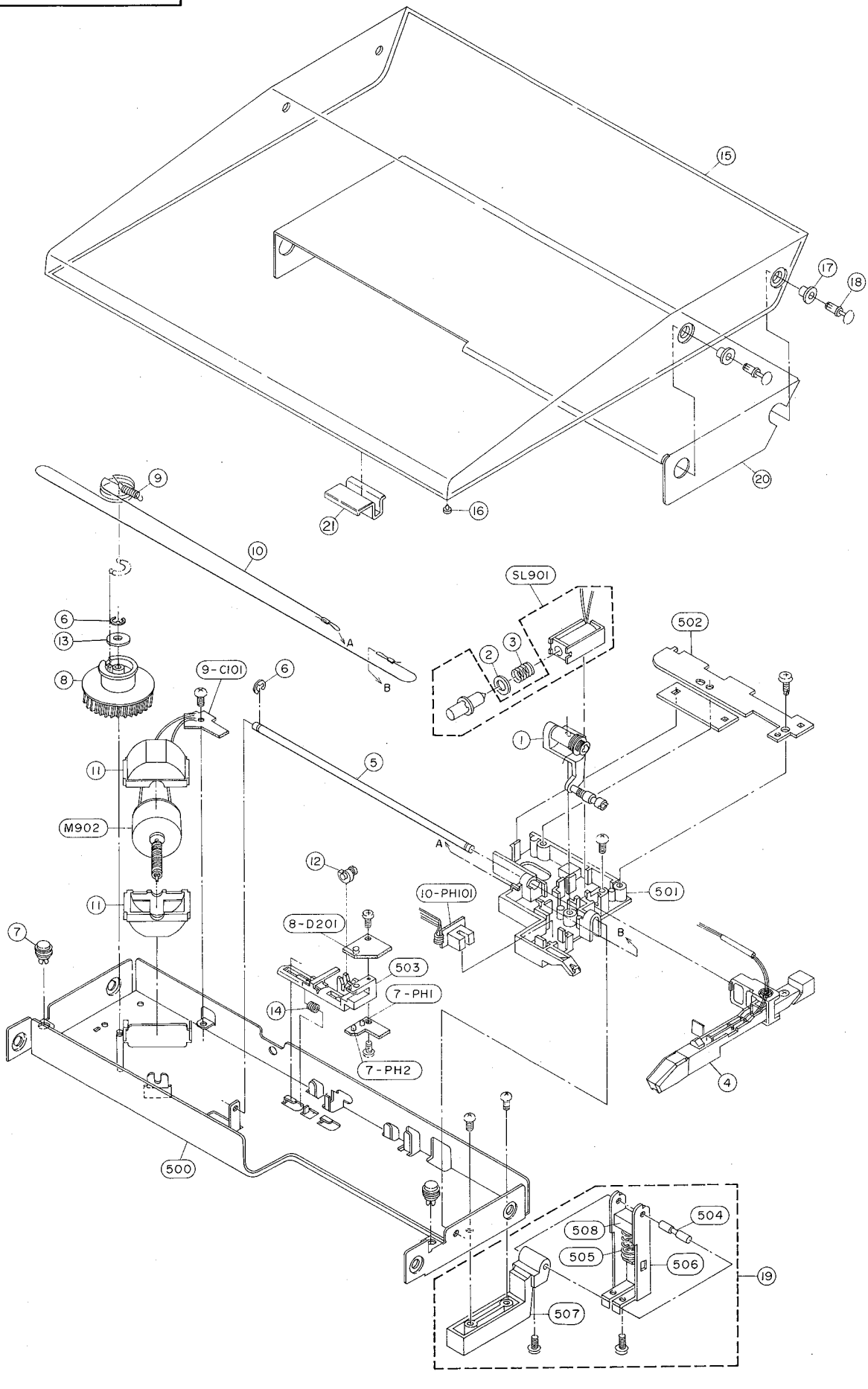
Ref. No.	Part No.	Description
12-IC1	EI-357879	IC LA5512
12-VR1	EV-315540	R S-FIX H D8 3P 502
12-VR2	EV-336853	R S-FIX H KVSF807U 3P 103

13. ASSEMBLY BLOCK

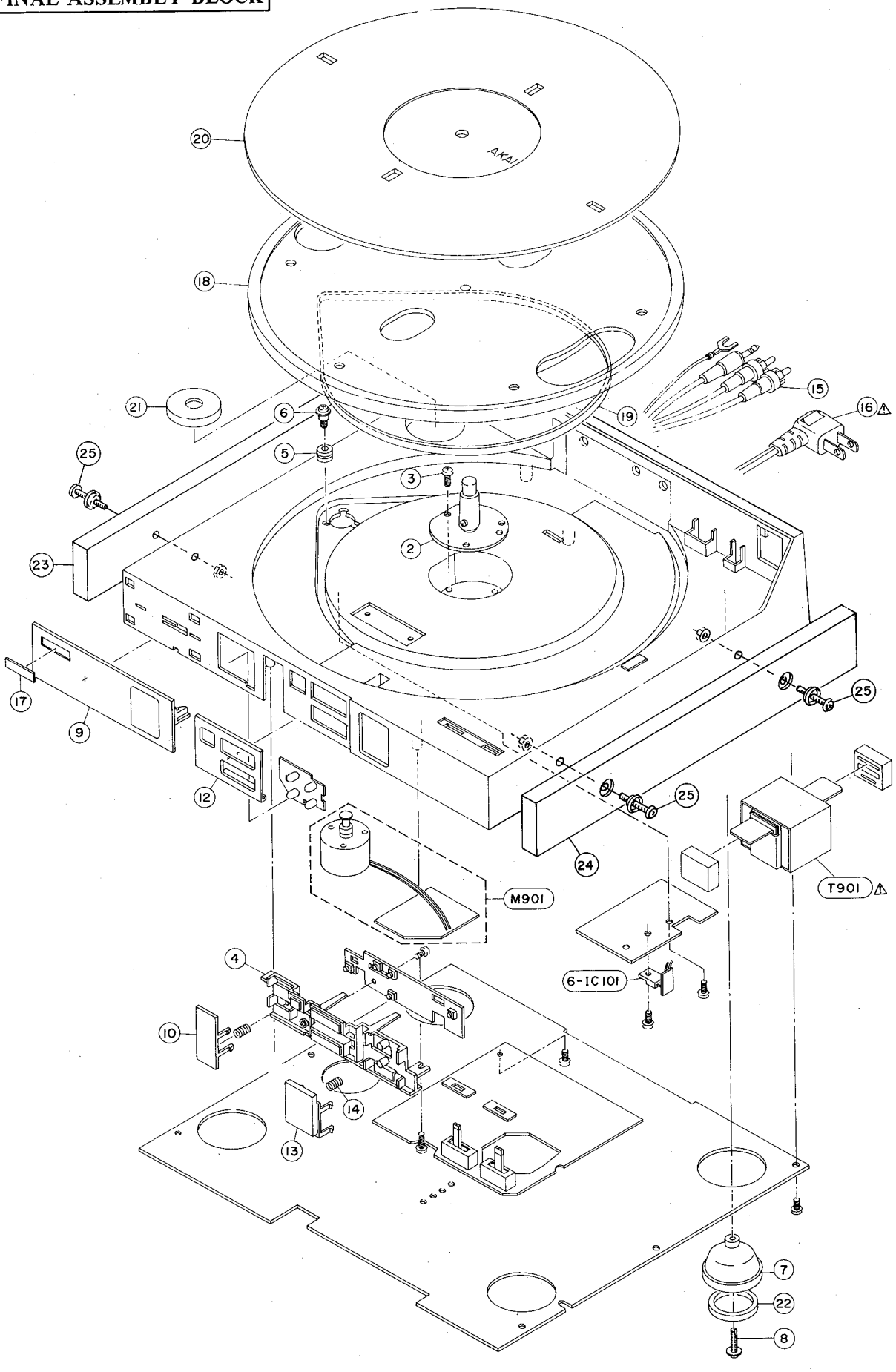
Ref. No.	Part No.	Description
13-1	TP-P1041A130B	LIFTER BLK AP-M313-C
13-2	ZW-288764	PW51X078X020PBR
13-3	ZG-354975	SP PUSH PLUNGER
13-4	TP-359742	TONE ARM ARM-M313
13-5	MS-360161	GUIDE RAIL
13-6	ZW-270101	RING E 300SUP CMT
13-7	MR-308836	PULLEY
13-8	MZ-360159	GEAR TRACKING
13-9	ZG-357752	SP T5-04.0/0.40-16.0 T5-111
13-10	MZ-360550-A	TONE ARM OPERATION PART
13-11	MB-349219	CUSHION MOTOR
13-12	TP-344537	CAM LOCATION SENSER
13-13	ZW-659755	PW43X110X050NYL
13-14	ZG-362306	SP PUSH POSITION SENSOR
13-15	BC-B349261H	DUST COVER AP-M719 PART
13-16	MB-343057	CUSHION COVER
13-17	EZ-349251B	BUSH COVER(B)
13-18	ZW-362110	RV NYL40X080 BL
13-19	TP-P1041A110A	HINGE BLK AP-M50-C
13-20	SC-360170A	COVER CHASSIS 313
13-21	TP-360698	DUST COVER FINGER
13-M902	BM-P1049A060A	MOTOR ARM BLK AP-M313-C
13-SL901	EP-359740	SOLENOID P1049

NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.

ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK



14. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
14-1-B	BC-360163D	CABINET AP-M719-B
14-1-G	BC-360163E	CABINET AP-M719-G
14-2	TP-349346	SPINDLE ASSY
14-3	ZS-310984	PT BR30X08STL CMT
14-4-B	SK-360171C	KNOB OPERATION-B2
14-4-G	SK-360171D	KNOB OPERATION-G
14-5	MB-345351B	CUSHION RUBBER (2)
14-6	ZS-350767	SCREW
14-7	SA-336281D	INSULATOR (D)
14-8	ZS-353104	BT PAN30X18STL CMT C
14-9-B	BB-B360164D1	PANEL LED AP-M719-B PART
14-9-G	BD-B360164E1	PANEL LED AP-M719-G PART
14-10-B	SK-360166B	KNOB POWER-B
14-10-G	SK-360166C	KNOB POWER-G
14-11	ZG-364128	SP PUSH POWER
14-12-B	BD-360168C	PANEL OPERATION B2
14-12-G	BD-360168D	PANEL OPERATION G
14-13-B	SK-360169C	KNOB LIFTER-B2
14-13-G	SK-360169D	KNOB LIFTER-G
14-14	ZG-364126	SP PUSH LIFTER
14-15	EW-358749	CORD 2P AUDIO [EXCEPT A]
14-15A	EW-358750	CORD 2P AUDIO CORD UL [A]
14-16	*EW-371669	AC CORD 200 KP211VFF J [J]
14-16A	*EW-374894	AC CORD 2C VM-0129A,VFF U/T [U]
14-16B	*EW-207742	AC CORD 2C VM-0238,SPT-1 UC [C,A]
14-16C	*EW-336923	AC CORD 2C KP-419C,LTCE-2F EV [E]
14-16D	*EW-346249	AC CORD 2 CORES LCFL2X0.75 B [B]
14-16E	*EW-347898	AC CORD 2 CORES VM-0436,LCFL S [S]
14-17-B	SM-361028C	NAME PLATE AKAI (C)
14-17-G	SM-361028D	NAME PLATE AKAI (D)
14-18	TP-366863B	PLATTER(B)
14-19	MB-355119	BELT EP
14-20A	TP-348266A	TABLE SHEET A [EXCEPT A]
14-20B	TP-348266B	TABLE SHEET B [A]
14-21	AX-332567D	45 ADAPTER-B
14-22	SA-B367458	RING INSULATOR PART
14-T901	*BT-361005	TRANS POWER APT-1049-10 (J) [J]
14-T901A	*BT-361004	TRANS POWER APT-1049-70 (U) [U]
14-T901B	*BT-361006	TRANS POWER APT-1049-30(C,A) [C,A]
14-T901C	*BT-361007	TRANS POWER APT-1049-40 (E) [E]
14-T901D	*BT-361008	TRANS POWER APT-1049-50 (B,S) [B,S]
14-M901	BM-P1041A030A	MOTOR MAIN BLK AP-M50-C(U)
14-23	SP-371928	SIDE BOARD (L)
14-24	SP-371929	SIDE BOARD (R)

SYMBOL FOR COLOR VARIATION

G : GOLD
B : BLACK

INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
AX-332567D	14-21	ED-366620	5-D102	ET-344472	10-PH101	SP-371928	14-23
BA-P1049A020C	2-1	ED-366621	9	ET-359746	26	SP-371929	14-24
BA-P1049A020D	2-1A	ED-366621	5-D103	ET-359746	7-PH1	TP-P1041A110A	13-19
BB-B360164D1	14-9-B	ED-366621	5-D104	ET-359746	7-PH2	TP-P1041A130B	13-1
BC-B349261H	13-15	EF-355374	17	ET-365456	29	TP-344537	13-12
BC-360163D	14-1-B	EF-355374	4-F1B	ET-365456	3-TR1	TP-348266A	14-20A
BC-360163E	14-1-G	EF-593706	16	ET-365456	3-TR2	TP-348266B	14-20B
BD-B360164E1	14-9-G	EF-593706	4-F1A	EV-315540	12-VR1	TP-349346	14-2
BD-360168C	14-12-B	EH-349274	3-IB1	EV-336853	12-VR2	TP-359742	32
BD-360168D	14-12-G	EI-357879	19	EV-362299	3-VR1	TP-359742	13-4
BM-P1041A030A	2	EI-357879	12-IC1	EW-207742	14-16B	TP-360698	13-21
BM-P1041A030A	14-M901	EI-359733	20	EW-336923	14-16C	TP-366863B	14-18
BM-P1049A060A	1	EI-359733	3-IC1	EW-346249	14-16D	ZG-354975	13-3
BM-P1049A060A	13-M902	EI-359734	18	EW-347898	14-16E	ZG-357752	13-9
BT-361004	4	EI-359734	6-IC101	EW-358749	14-15	ZG-362306	13-14
BT-361004	14-T901A	EI-359735	21	EW-358750	14-15A	ZG-364126	14-14
BT-361005	3	EI-359735	3-IC2	EW-371669	14-16	ZG-364128	14-11
BT-361005	14-T901	EO-345922	3-L1	EW-374894	14-16A	ZS-310984	14-3
BT-361006	5	EP-359740	22	EZ-349251B	13-17	ZS-350767	14-6
BT-361006	14-T901B	EP-359740	13-SL901	MB-343057	13-16	ZS-353104	14-8
BT-361007	6	ER-333065	3-R55	MB-345351B	14-5	ZS-367587	14-25
BT-361007	14-T901C	ER-359738	3-R7	MB-349219	13-11	ZW-270101	13-6
BT-361008	7	ER-359739	3-R56	MB-355119	30	ZW-288764	13-2
BT-361008	14-T901D	ES-337898	24	MB-355119	14-19	ZW-362110	13-18
EC-348696	9-C101	ES-337898	11-SW301	MR-308836	13-7	ZW-659755	13-13
ED-322238	8	ES-349367	25	MS-360161	13-5		
ED-322238	3-D8	ES-349367	4-TS1	MZ-360159	31		
ED-344280	12	ES-349367	4-TS2	MZ-360159	13-8		
ED-344280	3-D1	ES-349367	4-TS3	MZ-360550-A	13-10		
ED-344280	3-D3	ES-349367	4-TS4	SA-B367458	14-22		
ED-359745	11	ES-349367	4-TS5	SA-336281D	14-7		
ED-359745	8-D201	ES-359736	23	SC-360170A	13-20		
ED-361267	13	ES-359736	3-SW1	SK-360166B	14-10-B		
ED-361267	3-D6	ES-359736	3-SW2	SK-360166C	14-10-G		
ED-361269	14	ET-306719	28	SK-360169C	14-13-B		
ED-361269	3-D5	ET-306719	3-TR4	SK-360169D	14-13-G		
ED-362910	15	ET-306719	3-TR5	SK-360171C	14-4-B		
ED-362910	3-D7	ET-330225	27	SK-360171D	14-4-G		
ED-366620	10	ET-330225	3-TR10	SM-361028C	14-17-B		
ED-366620	5-D101	ET-330225	3-TR11	SM-361028D	14-17-G		

ABBREVIATIONS (TURNTABLE)

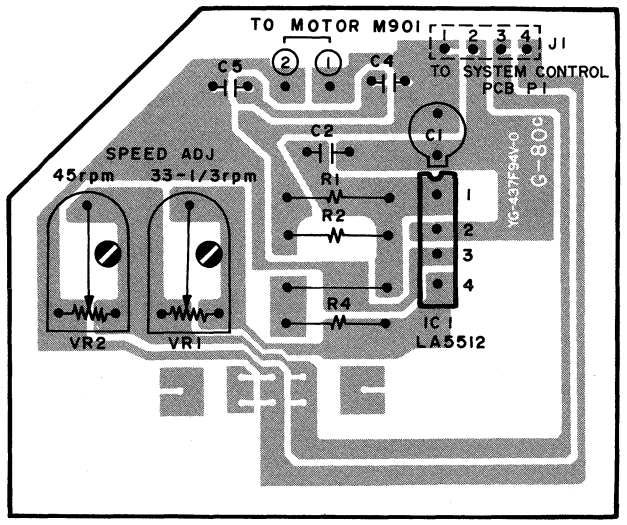
ABBREVIATION	EXPLANATION
ADJ	ADJust, or ADJustment
CH	CHannel
FWD	FoWarD
"H"	High
"L"	Low
LED	Light Emitting Diode
MI-COM	MIcro COMputer
PCB	Printed Circuit Board
REV	REVerse
SENS	SENSor, or SENSitivity
SYSCON	SYStem CONtrol
SW	SWitch
T.S	Tracking Sensor
VR	Variable Resistor

AKAI ELECTRIC CO., LTD.
12-14, 2-Chome, Higashi-Kojiya, Ohta-Ku, Tokyo, Japan
TEL: Tokyo (742) 5111 CABLE: HIFIAKAI TOKYO TELEX: J26261
Printed No. 870904-I1-1100 Printed Date: September 19, 1987
350 Printed in Japan

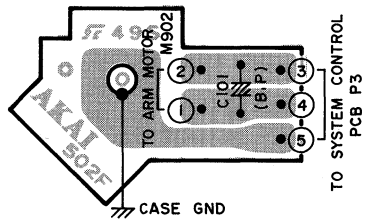
AKAI

MODEL AP-M719

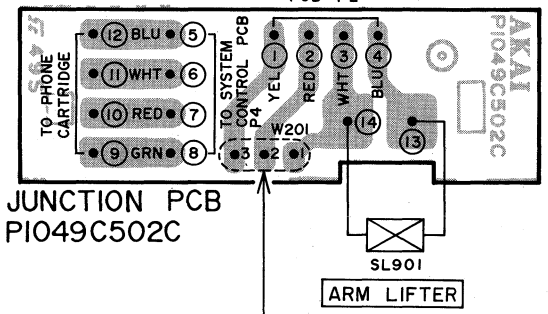
SCHEMATIC DIAGRAM
AND PC BOARDS



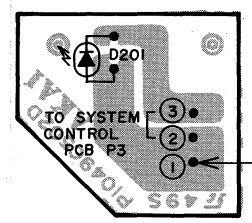
MOTOR PCB



FILTER PCB
P1049C502F



JUNCTION PCB
P1049C502C



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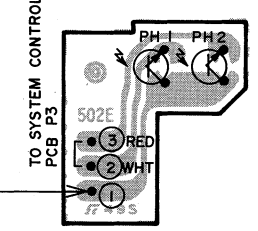

POSITION SENSOR PCB
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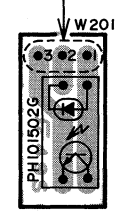
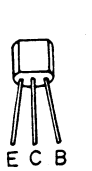


TRACKING SENSOR PCB
P1049C502G

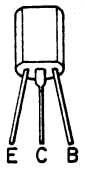
IC1 ----- 2B,C
IC2 ----- 1,2C

TR1,2 ---- 3B
TR4 ----- 3C
TR5 ----- 2C
TR10 ---- 2C
TR11 ---- 3B

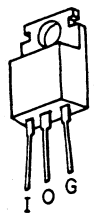
P1 ----- 3C
P2,3 ---- 3B
P4 ----- 3A
WW101 --- 3C
WW102 --- 2C
WW103 --- 1C



2SC1815
2SC2001



2SC2236



TA78M12P

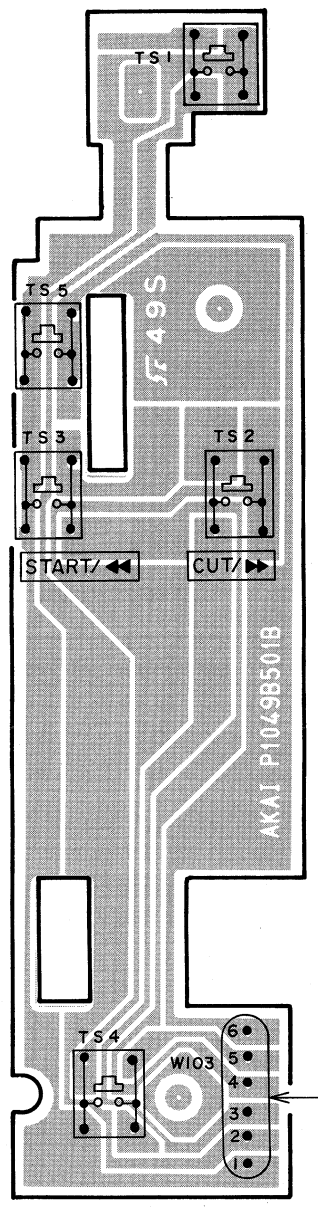
IC 101
I : IN
O : OUT
G : GND

B = NPN TRANSISTOR

TR1,2 ---- 2SC2001(K)
TR4,5 ---- 2SC2236(O,Y)
TR10,11 2SC1815(Y,GR)

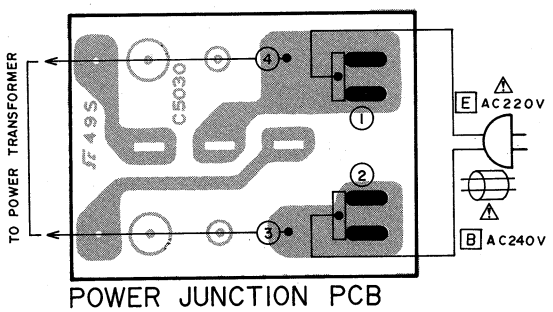
REPEAT

ARM LIFTER ▼/▼

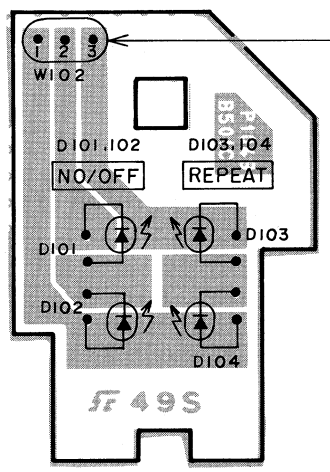


OPERATION PCB
P1049B501B

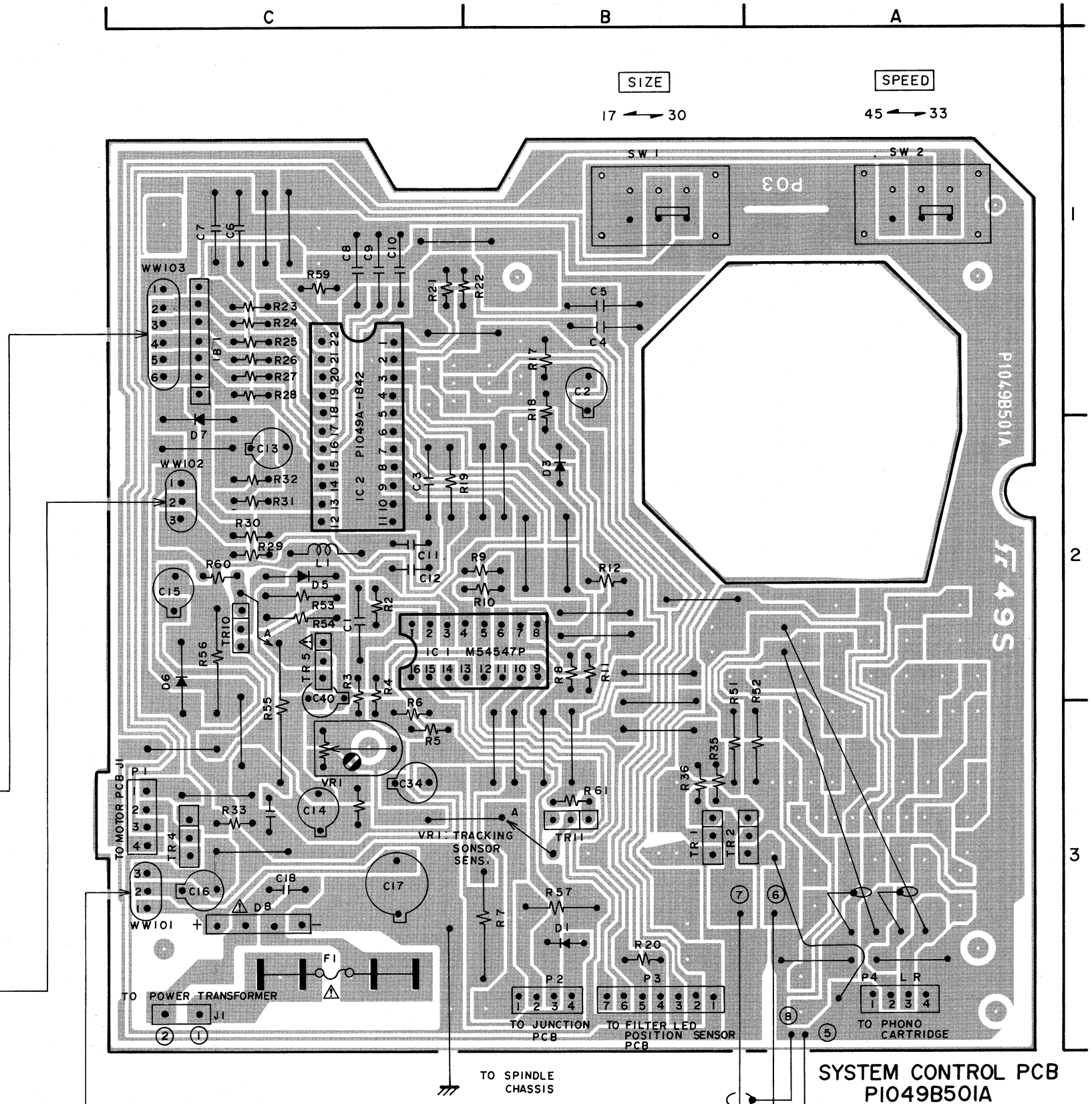
POWER NO/STANDBY



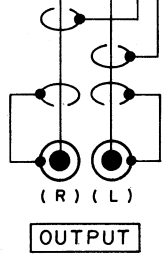
POWER JUNCTION PCB
P1049C5030

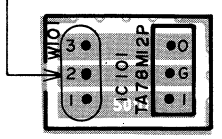


INDICATOR PCB
P1049B501C



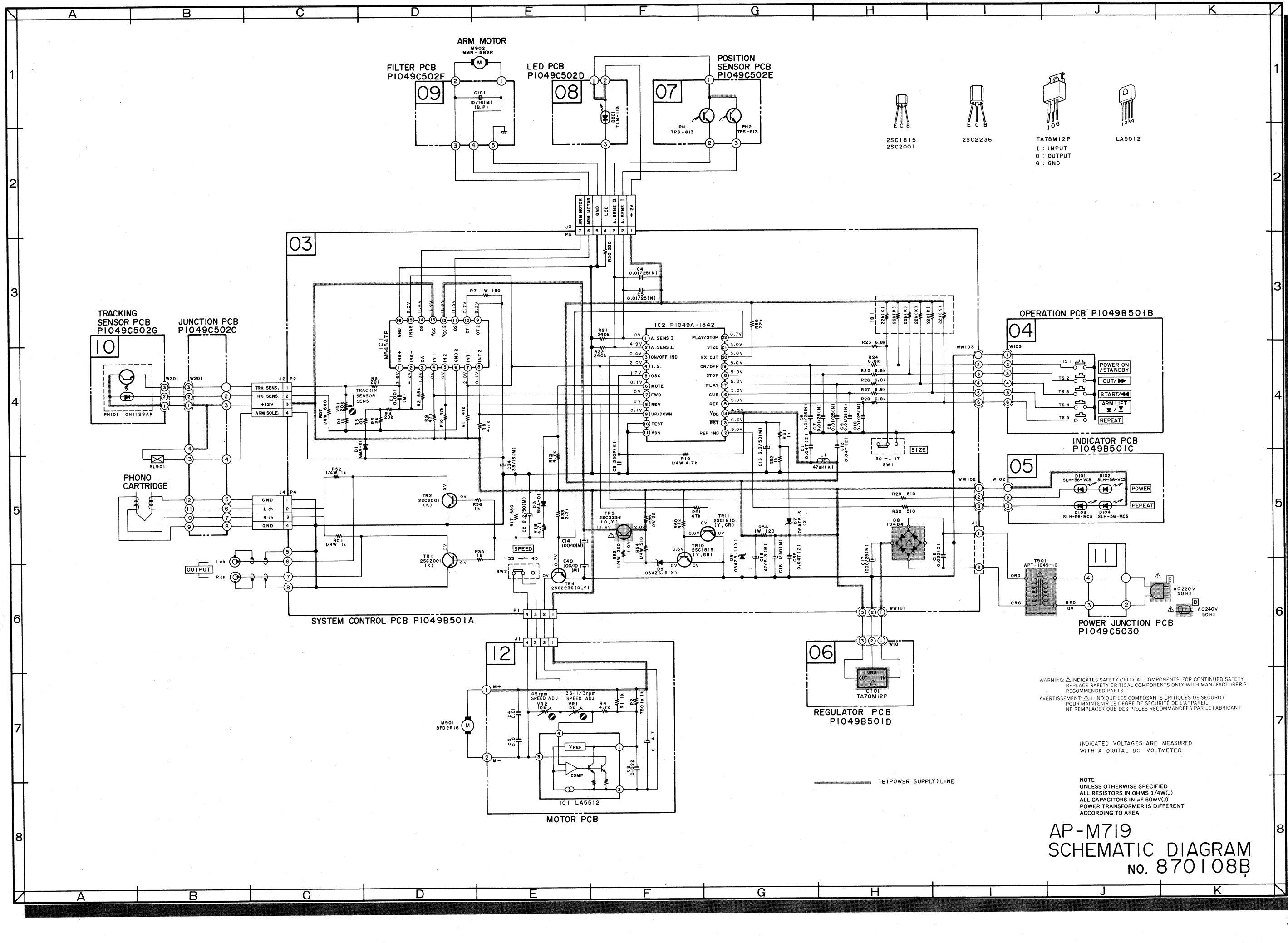
SYSTEM CONTROL PCB
P1049B501A





REGULATOR PCB
P1049B501D

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



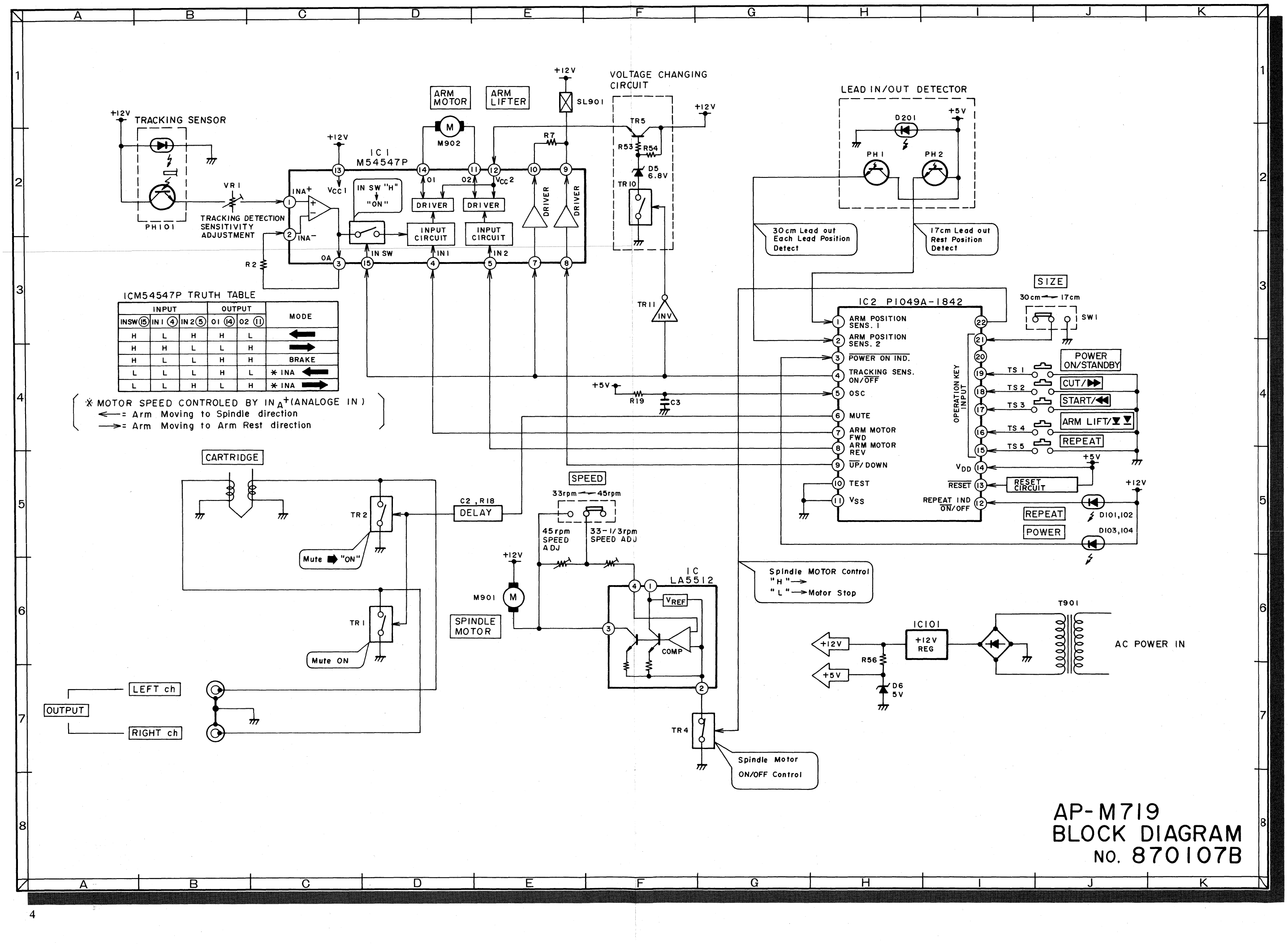
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

INDICATED VOLTAGES ARE MEASURED WITH A DIGITAL DC VOLTMETER.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

AP-M719
SCHEMATIC DIAGRAM
NO. 870108B 3



AP-M719
BLOCK DIAGRAM
NO. 870107B